16 December 1988

SITE:

Allegany Ballistics Laboratory, Mineral County, WV Northern Riverside Waste Disposal Area (Site 1)

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SUMMARY:

o Ground water, surface water, sediment, and soil gas samples were collected at Site 1. A number of contaminants were detected at levels higher than the comparison values. Based upon the high concentrations of several of the contaminants, the site may present a threat to human health and the environment.

BACKGROUND

- Waste disposal was reportedly begun at Site 1 during the 1940's. The site covers approximately 13 acres.
- O Historic waste disposal practices at the site have included: landfilling along the bank of the North Branch Potomac River, disposal of waste liquids in open pits, storage of hazardous wastes, and burning of inert solid wastes.
- o Present activities at the site are limited to burning of materials contaminated with explosives on earthen pads.
- o A preliminary Confirmation Study has been prepared and submitted to NAVFAC. A Remedial Investigation/Feasibility Study is underway.

DISCUSSION

e Eight shallow (35 to 57 feet) and one deep (80 feet) monitoring wells were installed. Seven of the wells have been sampled three times. Samples were analyzed for VOCs, semi VOCs, metals, TCDD, explosives, pH, chloride, sulfate and nitrates. The two remaining wells, installed in 1987, were sampled only for VOCs. Ground water samples show confirmed (detected at least twice, except two new wells), elevated concentrations of the following:

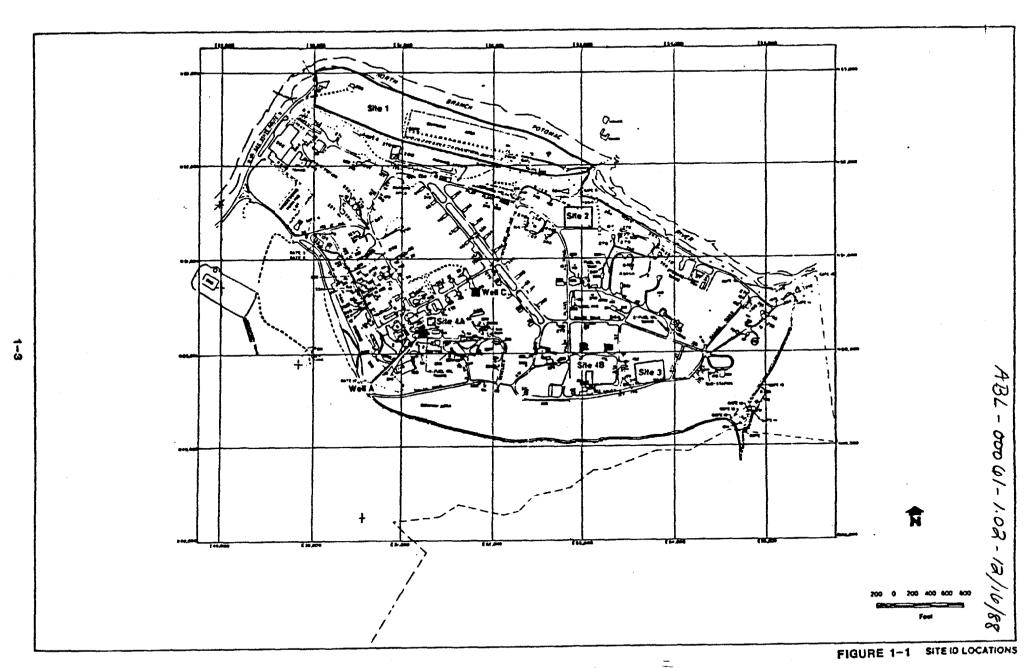
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Parameter	Highest Level (ppm)	Comparison Value (ppm)
Trans 1,2-dichloroethene	6	0.01detection limit
Trichloroethene	130	0.005MCL
1,1,1-Trichloroethane	3.2	0.2MCL
Tetrachloroethene	0.5	0.005detection limit
Vinyl Chloride	0.016	0.002MCL
Methylene Chloride	7.9	0.01detection limit
Toluene	0.4	0.01detection limit
Lead	16.2	0.05Primary Drinking
		Water Standard
Zinc	0.03	0.02detection limit
2,4,6-TNT	0.003	0.0007detection limit
2,6-DNT	0.002	0.0005detection limit
RDX	0.02	0.0006detection limit

- Three surface water samples were collected from the North Branch Potomac River adjacent to Site 1 in 1985, 1986 and 1987. In 1985 and 1986 samples were analyzed for VOCs, semi VOCs, metals, TCDD, explosives, chloride, sulfate, and nitrates. In 1987, samples were analyzed for metals, explosives, and nitrates. None of the compounds tested were confirmed above limits of detection.
- Three sediment samples were collected at locations corresponding to the surface water sampling locations in 1985 and 1986. In 1985, samples were analyzed for metals, TCDD, and explosives. In 1986, sediment samples were analyzed for semi VOCs, metals, and explosives. None of the constituents tested were confirmed either above limits of detection or for metals, above background ranges.
- o Soil gas samples were analyzed for TCE. Results were positive across much of the downgradient extent of the site. Soils may be impacted.
- o The most probable exposure pathway is ingestion of ground water. Ground water is used as a source of drinking water supply.
- o Future Plan: Additional monitor wells will be installed at this site. Soil samples will be collected and analyzed. Additional ground water analyses will be performed to evaluate the depth and extent of contamination, and to assist in the Feasibility Study evaluation.

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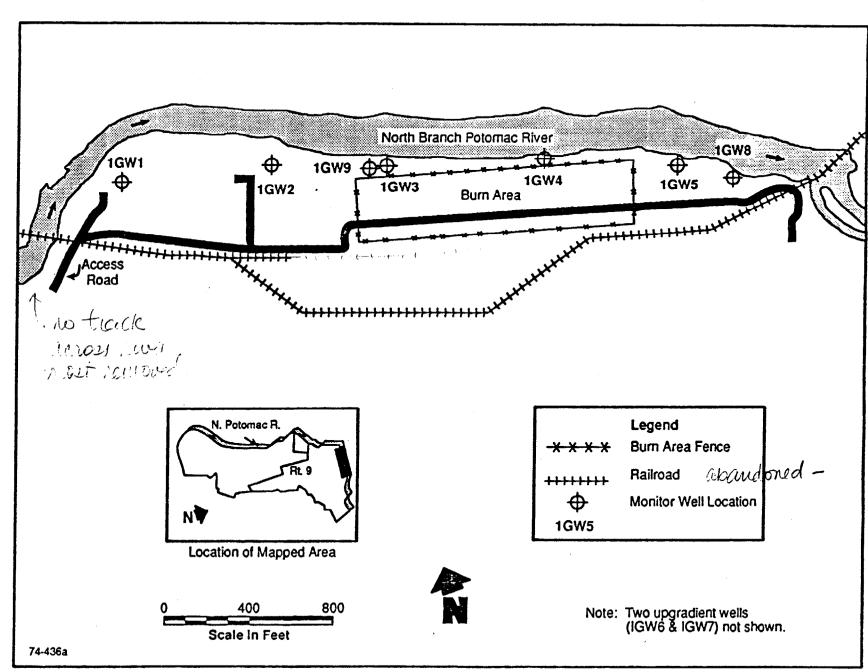


FIGURE 1-2 NORTHERN RIVERSIDE WASTE DISPOSAL AREA (SITE 1)

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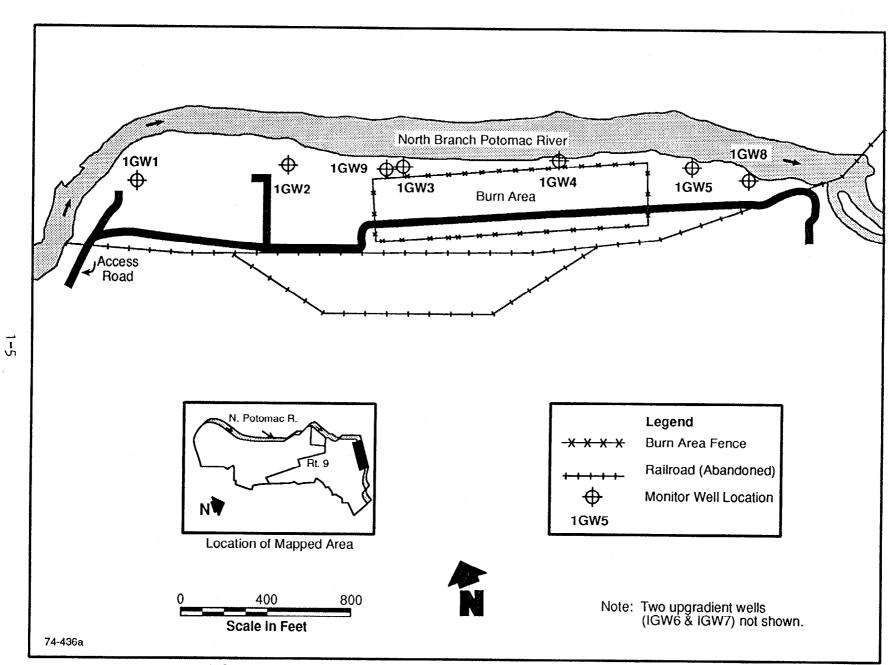


FIGURE 1-2 NORTHERN RIVERSIDE WASTE DISPOSAL AREA (SITE 1)